

REMARKS

In the Office Action, the Examiner:

- rejects claim 15 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement;
- rejects claims 1-10 and 15-20 under 35 U.S.C. § 103(a) as allegedly unpatentable over ERICKSON et al. (U.S. Patent No. 6,882,765; hereinafter ERICKSON) and WALTERS et al. (U.S. Patent Application Pub. No. 2002/0176131; hereinafter WALTERS);
- rejects claim 11 under 35 U.S.C. § 103(a) as allegedly unpatentable over NISHI (U.S. Patent Application Pub. No. 2003/0185566); and
- rejects claim 12-14 under 35 U.S.C. § 103(a) as allegedly unpatentable over NISHI and ERICKSON.

Applicant traverses this objection and these rejections.

By way of this amendment, Applicant amends claims 1, 6, 11, and 15 to improve form. No new matter is added. Claims 1-20 are pending.

Rejection under 35 U.S.C. § 112, first paragraph

Claim 15 stands rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicant amends claims 15 to address the Examiner's concerns. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of claim 15 under 35 U.S.C. 112, first paragraph.

Rejection Under 35 U.S.C. § 103(a) based on ERICKSON and WALTERS

Claims 1-10 and 15-20 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over ERICKSON and WALTERS. Applicant respectfully traverses this rejection.

Amended independent claim 1 recites a method comprising providing, in an optical network, an optical cross-connect system (OXC) having a working port and a spare port; providing a router having a working port to transmit or receive high priority data to or from the working port of the OXC and a protection port to transmit or receive low priority data to or from the spare port of the OXC; detecting a failure in the router; sending a signal from the router to the OXC, where the signal indicates the failure; causing the working port of the OXC to connect to the protection port of the router in response to detection of the signal, where the transmission of low priority data to or from the router is preempted by the transmission of the high priority data to or from the router, in response to the failure of the router; and transmitting the high priority data from the router to the OXC via the protection port. Applicant submits that ERICKSON and WALTERS, whether taken alone or in any reasonable combination, do not disclose or suggest one or more features of amended claim 1.

For example, ERICKSON and WALTERS do not disclose or suggest causing a working port of an OXC (that is in an optical network) to connect to a protection port of a router in response to detection of a failure signal, where a transmission of low priority data to or from the router (via the protection port) is preempted by a transmission of a high priority data to or from the router, in response to a failure of

the router, as recited by amended claim 1. The Examiner admits that ERICKSON does not disclose, "a working port to transmit or receive high priority data and a protection port to transmit or receive low priority data where the transmission of low priority data is preempted by the transmission of the high priority data, in response to failure of the router..." and relies on Fig. 53 and ¶¶ 487 and 508 of WALTERS for allegedly disclosing this feature. (Office Action, p. 4.) Applicant disagrees with the Examiner's interpretation of WALTERS.

Paragraph 0487 of WALTERS discloses:

1:1 path protection is supported using the same hardware features but different control software. With 1:1 protection, two lightpaths are setup with one path supporting high priority data traffic and the other supporting lower priority, pre-emptable traffic. When a failure occurs on the lightpath supporting the high priority traffic, the low priority traffic is preempted and the high priority traffic is re-routed over the low priority lightpath. While 1:1 protection provides the capability to use the protection path for low priority traffic, it will take longer to switchover since both ingress and egress OTS's are involved and the NMS must co-ordinate the switchover. However, it is expected that service can be restored within one second.

This section of WALTERS does not disclose or suggest causing a working port of an OXC (that is in an optical network) to connect to a protection port of a router in response to detection of a failure signal, where a transmission of low priority data to or from the router (via the protection port) is preempted by a transmission of a high priority data to or from the router, in response to a failure of the router, as recited by amended claim 1. Rather, this section of WALTERS discloses that in a 1:1 protection path, two light paths are setup between an ingress OTS (OXC) and an egress OTC (OXC). One of the light paths supports high priority traffic and the other light path supports low priority traffic. When the high priority light path fails,

low priority traffic is preempted, and the low priority light path is used to transmit high priority traffic from the ingress OTS to the egress OTS.

With reference to Fig. 53 (which is described by ¶ 0508) of WALTERS, the Examiner alleges that OTS B corresponds to a router and that OTS C corresponds to the claimed OXC. Applicant submits that the OTS B cannot reasonably be construed to be a router having a working port to transmit or receive high priority data to or from the working port of the OXC and a protection port to transmit or receive low priority data to or from the spare port of the OXC. WALTERS specifically discloses that an OTS is an OXC. (See e.g., WALTERS, ¶ 0071.) Thus, Fig. 53 of WALTERS merely discloses that an OXC (OTS B) uses a 1:1 protection path to transmit data to another OXC (OTS C). Applicant further submits that WALTERS specifically discloses that a 1:1 path protection is used between an ingress OTS and an egress OTS (that are part of an optical network). WALTERS does not disclose or suggest that 1:1 path protection is used between a SONET/router and an OTS (that is part of the optical network), as would be required under the Examiner's interpretation of WALTERS. Therefore, this section of WALTERS does not disclose or suggest causing a working port of an OXC (that is in an optical network) to connect to a protection port of a router in response to detection of a failure signal, where a transmission of low priority data to or from the router (via the protection port) is preempted by a transmission of a high priority data to or from the router, in response to a failure of the router, as recited by amended claim 1.

For at least the foregoing reasons, Applicant submits that amended claim 1 is patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of amended claim 1 under 35 U.S.C. § 103(a) based on ERICKSON and WALTERS.

Claims 2-5 depend from claim 1. Therefore, Applicant submits that claims 2-5 are patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination, for at least the reasons given above with respect to amended claim 1.

Amended independent claims 6 and 15 recite features similar to (yet possibly of different scope than) features described above with respect to amended claim 1. Therefore, Applicant submits that amended claims 6 and 15 are patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination, for at least reasons similar to the reasons set forth above with respect to amended claim 1. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of amended claims 6 and 15 under 35 U.S.C. § 103(a) based on ERICKSON and WALTERS.

Claims 7-10 depend from claim 6 and claims 16-20 depend from claim 15. Therefore, Applicant submits that claims 7-10 and 16-20 are patentable over ERICKSON and WALTERS, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to amended claims 6 and 15, respectively.

Rejection under 35 U.S.C. § 103(a) based on NISHI

Claim 11 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over NISHI. Applicant respectfully traverses this rejection.

Amended claim 11 recites an optical cross-connect system, located in an optical network, the optical cross-connect system comprising a spare port to transmit low priority data to or from a router that is external to the optical cross-connect system; and a working port to transmit high priority data to or from a primary router that is external to the optical cross-connect system, where the working port is connected to the router in response to a failure of the primary router, and where the transmission of low priority data to or from the router is preempted by the transmission of the high priority data to or from the router, in response to the failure of the primary router. NISHI does not disclose or suggest one or more features of amended claim 11.

For example, NISHI does not disclose or suggest an optical cross-connect system, located in an optical network, the optical cross-connect system comprising a spare port to transmit low priority data to or from a router that is external to the optical cross-connect system, as recited by amended claim 11. The Examiner relies on Fig. 13 and ¶ 0093 of NISHI for allegedly disclosing, "an optical cross-connect system comprising: a spare port to transmit low priority data to or from a router." (Office Action, p. 13.) While not acquiescing in the rejection of previously presented claim 11, Applicant submits that NISHI does not disclose or suggest the above-identified feature of claim 11.

Paragraph 0093 of NISHI (which refers to Fig. 10) does not disclose or suggest an optical cross-connect system, located in an optical network, the optical cross-connect system comprising a spare port to transmit low priority data to or from a router that is external to the optical cross-connect system, as recited by amended claim 11. Rather, this section of NISHI discloses that an optical cross-connect device includes input circuits 40-1 to 40-4 that are connected to output circuits 50-1 to 50-4 by optical switches 11 and 12. The optical switch 40-1, for example, has a working line W that receives a high priority signal and a protection line P that receives a lower priority signal. In a normal state, the input circuit 40-1 sends, by the working line W, the high priority signal to the optical switch 11, which subsequently sends the high priority signal to a working line of the output circuit 50-1. In a normal state, the input circuit 40-1 sends, by the protection line P, the lower priority signal to the optical switch 12, which subsequently sends the lower priority signal to a protection line of the output circuit 50-1.

Applicant submits that the optical switch 12, of NISHI, cannot reasonably correspond to the claimed router that is external to the optical cross-connect system. NISHI discloses that the optical switch 12 is part of the optical cross-connect device (OXC). (See e.g., ¶ 0084.) Therefore, even if the optical switch 12 could reasonably be construed to be a router – a point Applicant does not concede – the router, of NISHI, would be part of the optical cross-connect system, and not external to the optical cross-connect system, as would be required under the Examiner's interpretation of NISHI. Therefore, Applicant submits that the optical

switch 12 cannot reasonably correspond to the claimed router that is external to the optical cross-connect system.

Similarly, Applicant submits that the optical switch 12, of NISHI, cannot reasonably correspond to the claimed primary router that is external to the optical cross-connect system.

Figure 13, of NISHI, (which is described by ¶ 0105) discloses a different embodiment of an optical cross-connect device. Figure 13, of NISHI, does not disclose or suggest an optical cross-connect system, located in an optical network, the optical cross-connect system comprising a spare port to transmit low priority data to or from a router that is external to the optical cross-connect system, as recited by amended claim 11, for at least the reasons given above with respect to ¶ 0093 and Figure 10 of NISHI.

For at least the foregoing reasons, Applicant submits that amended claim 11 is patentable over NISHI. Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of amended claim 11 under 35 U.S.C. § 103(a) based on NISHI.

Rejection under 35 U.S.C. § 103(a) based on NISHI and ERICKSON

Claims 12-14 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over NISHI and ERICKSON. Applicant respectfully traverses this rejection.

Claims 12-14 depend from claim 11. While not acquiescing in the rejection of claims 12-14, Applicant submits that the disclosure of ERICKSON does not remedy the deficiencies in the disclosure of NISHI, as set forth above with respect to

amended claim 11. Therefore, Applicant submits that claims 12-14 are patentable over NISHI and ERICKSON, whether taken alone or in any reasonable combination, for at least the reasons given above with respect to amended claim 11.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone to expedite prosecution of this application.

As Applicant's remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicant's silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such assertions (e.g., whether a reference constitutes prior art, assertions as to dependent claims, reasons for combining or modifying a reference, allegations of Official Notice, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met, and Applicant reserves the right to analyze and dispute such assertions/requirements in the future.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

HARRITY & HARRITY, LLP

By: /Michael S. Brooke, Reg. No. 41,641/
Michael S. Brooke
Registration No. 41,641

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11350 Random Hills Road
Suite 600
Fairfax, Virginia 22030
Telephone: (571) 432-0800
Facsimile: (571) 432-0808

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